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| (21) International Application Number: PCT/CA99/00751<br>(22) International Filing Date: 13 August 1999 (13.08.99)<br>(30) Priority Data:<br>60 096,649 14 August 1998 (14.08.98) US<br>(71)(72) Applicants and Inventors: PRATO, Frank, S. [CA/CA];<br>408 Briarhill Avenue, London, Ontario N5Y 1P2 (CA).<br>STODILKA, Robert, Z. [CA/CA]; 424 The Kingsway,<br>Etobicoke, Ontario M9A 3W1 (CA). KEMP, Brad, J.<br>[CA/CA]; 49 Queen Mary Crescent, London, Ontario N6H<br>4B5 (CA). NICHOLSON, Richard, L. [CA/CA]; 7 Sir<br>Robert Place, Arva, Ontario N0M 1C0 (CA).<br>(74) Agents: RUSTON, David, A. et al.; Sim & McBurney, 6th<br>Floor, 330 University Avenue, Toronto, Ontario M5G 1R7<br>(CA). |    | (81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG,<br>BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE,<br>ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,<br>KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD,<br>MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD,<br>SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ,<br>VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW,<br>SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG,<br>KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY,<br>DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,<br>SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW,<br>ML, MR, NE, SN, TD, TG).<br><br><b>Published</b><br><i>With international search report.<br/>Before the expiration of the time limit for amending the<br/>claims and to be republished in the event of the receipt of<br/>amendments.</i> |

(54) Title: APPLICATION OF SCATTER AND ATTENUATION CORRECTION TO EMISSION TOMOGRAPHY IMAGES USING INFERRED ANATOMY FROM ATLAS

(57) Abstract

A method of applying scatter and attenuation correction to emission tomography images of a region of interest of a patient under observation comprises the steps of aligning a three-dimensional computer model representing the density distribution within the region of interest with the emission tomography images (56, 58) and applying scatter and attenuation correction to the emission tomography images using the aligned computer model as a guide (60).

